

Claims

1. An improved doorbell installation of the type having a ringer device such as a push button switch mounted near an exterior doorway or gate to a dwelling and connected for actuating a signaling device, such as an electric bell, buzzer or audio sequence generator at a location remote from the ringer device where the signal can be heard by occupants of the dwelling or other premises, the improvement comprising:
 - a ring frequency counter connected for disabling the signaling device upon the occurrence of a predetermined number of actuations of the signaling device within a preset first time interval, and a rest interval timer operative for re-enabling the signaling device after a preset second time interval, whereby excessively repetitive actuation of the signaling device is prevented.
2. The improvement of claim 1 further comprising base interval timer means for timing said first time interval.
3. The improvement of claim 2 wherein said base interval timer means is self resetting upon lapse of said first time interval.
- 20 4. The improvement of claim 1 wherein said rest interval timer is connected for resetting said base interval timer upon lapse of said second time interval.
5. The improvement of claim 1 wherein either or both said predetermined number of actuations and said second time interval are adjustable.
- 25 6. The improvement of claim 1 further comprising third timer means connected for disabling said signaling device responsive to a continuous actuation of said signaling device exceeding a third time interval.

7. The improvement of claim 1 further comprising fourth timer means for timing total signaling device actuation time prior to said disabling and bypass means for preventing said disabling if the total ring time is less than a preset acceptable fourth time interval.
- 5 8. The improvement of claim 1 wherein said predetermined number of actuations of the signaling device is a single actuation.
9. An improved doorbell installation of the type having a ringer device such as a push button switch mounted near an exterior doorway or gate to a dwelling and connected for 10 actuating a signaling device, such as an electric bell, buzzer or audio sequence generator at a location remote from the ringer device where the signal can be heard by occupants of the dwelling or other premises, the improvement comprising:
 - a ring length timer connected for disabling the signaling device upon actuation thereof in excess of a preset total ringer actuation time within a preset ring time interval,
 - 15 and a rest interval timer initialized upon said disabling and operative for re-enabling the signaling device after a preset rest interval following the disabling of the signaling device, whereby excessive actuation of the signaling device is prevented.
10. The improvement of claim 9 wherein said ring length timer is operative for disabling 20 said signaling device responsive to either a continuous actuation of said ringer device exceeding said preset ring length time or a series of separate actuations jointly exceeding said preset ring length time within said preset ring time interval.
11. The improvement of claim 9 wherein said base interval timer means is self resetting 25 upon lapse of said preset ring time interval.
12. An improved doorbell installation of the type having a ringer device such as a push button switch mounted near an exterior doorway or gate to a dwelling and connected for actuating a signaling device, such as an electric bell, buzzer or audio sequence generator

at a location remote from the ringer device where the signal can be heard by occupants of the dwelling or other premises, the improvement comprising:

timer means connected for disabling said signaling device responsive to a continuous actuation of said ringer device exceeding a preset continuous ring time interval and a rest interval timer initialized upon said disabling and operative for re-enabling the signaling device after a preset rest interval following the disabling of the signaling device, whereby excessive actuation of the signaling device is prevented.

13. An improved doorbell installation of the type having a ringer device such as a push button switch mounted near an exterior doorway or gate to a dwelling and connected for actuating a signaling device, such as an electric bell, buzzer or audio sequence generator at a location remote from the ringer device where the signal can be heard by occupants of the dwelling or other premises, the improvement comprising:

a ring frequency counter connected for disabling the signaling device upon the occurrence of a predetermined number of actuations of the ringer device within a preset first time interval, a ring length timer connected for disabling the signaling device upon actuation thereof in excess of a preset total ringer actuation time within a preset ring time interval, and a rest interval timer initialized upon said disabling and operative for re-enabling the signaling device after a preset second time interval following the disabling of the signaling device, whereby excessively repetitive actuation of the signaling device is prevented.

14. An improved doorbell installation of the type having a ringer device such as a push button switch mounted near an exterior doorway or gate to a dwelling and connected for actuating a signaling device, such as an electric bell, buzzer or audio sequence generator at a location remote from the ringer device where the signal can be heard by occupants of the dwelling or other premises, the improvement comprising:

timer and counter circuits connected for disabling the ringer device for a predetermined rest interval upon the occurrence of one or both of a predetermined total

Express Mail Label No. EV 200260425 US

Date of Deposit: July 14, 2003

Law Offices of Natan Epstein

Attorney Docket DE034

ring actuations of the signaling device within a preset base time interval or one or more ring actuations having a total ring duration in excess of a preset total ring length.